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10/591,790	12/11/2006	Rudi Kraus	2004P02085	4511

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EXAMINER	
DUNN, DARRIN D	

ART UNIT	PAPER NUMBER
2121	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/591,790	KRAUS, RUDI	
	Examiner	Art Unit	
	DARRIN DUNN	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Office Action is responsive to the communication filed on 01/14/2009.

2. Claims 25-56 are pending.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 48 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5. Claim 48 recites "interrupting the partially autonomous mode by the autonomous agents of the individual systems." It is unclear how remote, autonomous agents interrupt a partially autonomous mode of a central system.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 25-28, 32-35, 38-46, 48-53, and 55-56 are rejected under 35 U.S.C. 102(a) as being anticipated by Liang (USPN 7308493).

8. As per claim 25, Liang teaches a method for managing and monitoring an operation of a plurality of distributed hardware and/or software systems that are integrated into at least one communications network ([Figure 1]), the plurality of distributed systems being responsible for providing a plurality of different services ([COL 5 lines 44-51] e.g. tasks), the method which comprises:

operating the plurality of distributed systems ([Figure 1-device nodes) in a distributed manner, with the plurality of different services (e.g., tasks) being respectively implemented by different autonomous individual systems (e.g., device nodes 112 120, 124, 1210, 1220), none of the plurality of different services being fixedly assigned to any of the different autonomous individual systems ([Figure 5 -element 508], [Figure 5A-element 512] e.g., task leader selection dynamically allocates tasks. No task is fixed to a particular node), but rather, the assignment of each of the different services to a particular one of the different autonomous individual systems changing dynamically during the provision of the respective service ([COL 4 lines 65-67], [COL 5 lines 1-20], [COL 6 lines 26-55] e.g., tasks are assigned to a node using the task manager selection base where conditions listed within the event table are used to select the most suitable node for a task. A task leader is designated via dynamic designation, i.e., dynamic assignment, where the conditions include location, timing, performance, network resources, etc)

with a central program ([COL 4 lines 5-10], [Figure 2-320] e.g., task leader selection base) stored in a data processing device ([Figure 2-element 320), processing system-related data

([COL 6 lines 25-45] e.g., data includes conditions used for selecting a task leader including processor speed, timing, performance, network resources, etc) that are present in the data processing device (e.g., element 321) or are received by the data processing device via a communications network ([COL 6 lines 56-67]);

autonomously deriving operation-related decisions from the data ([COL 6 lines 26-40] e.g., selecting a task leader and allocating a task to be performed based on the most suited node for executing the task);

based on the decisions, generating decision-specific control data ([COL 6 lines 59-67], [COL 7 lines 1-15] e.g. control tasks or executing tasks) for influencing the operation of one or more of the distributed hardware and/or software systems (e.g., performing management work based on the cures within the task, i.e., influencing the operation is interpreted as controlling which nodes processes a particular task); and

transmitting the control data (e.g., tasks), via the communications network, to data processing devices assigned to the respective distributed hardware and/or software systems ([COL 7 lines 1-10], [Figure 5-element 511])

9. As per claim 26, Liang teaches the method according to claim 25, wherein the central program ([Figure 2-321]) accesses at least one set of data (e.g., speed, network resource, location, timing, etc) stored in the data processing device and selected from the group consisting of rule data (e.g., selection base, i.e., conditions for selecting a task leader), performance data (e.g., processor speed), grouping data (e.g., topology), classification data (e.g., network resources), and availability data.

10. As per claim 27, Liang teaches the method according to claim 26, wherein the rule data ([Figure 2-element 321], [COL 6 lines 25-54]) comprise rules regarding priorities (e.g., task leader selection) and/or sequences and/or logical and/or temporal relationships (e.g., location of device nodes), and the performance data relate to a current operational load (e.g., network resources/performance) and/or temporally restricted and/or dynamic and/or periodically needed capacity requirement (e.g. performance)

11. As per claim 28, Liang teaches the method according to claim 25, wherein the system-related data are selected from the group consisting of operating plans ([COL 4 lines 28-35] e.g., MIB database), information regarding operating states of individual systems ([COL 4 lines 35-40] e.g., managing network directories), and operator input at a central and/or individual system level entered using an input device ([Figure 1-element 100, 102, 104])

12. As per claim 32, Liang teaches the method according to claim 25, wherein the control data are configured to control at least one of: starting a service ([Figure 5-511] e.g., task execution- starting a task), stopping a service, adding services, moving services, moving applications, and maintenance of a distributed hardware and/or software system (e.g., virus scanning)

13. As per claim 33, Liang teaches the method according to claim 25, wherein the operation-related decisions include determining administrative tasks and/or chains of tasks ([COL 4 lines 28-40] , [COL 6 lines 56-60] e.g, MIB database – includes task definition for series of operational steps. Tasks may be dynamically modified, i.e., determining administrative tasks, because modifying a task requires determining which task is modified)

14. As per claim 34, Liang teaches the method according to claim 33, which comprises, with the central program autonomously separating administrative tasks and/or chains of tasks into subtasks ([COL 5 lines 1-15]) taking into account logical and/or temporal relationships (e.g., topology, location) and/or dynamic influences and/or availability data and/or priorities and/or grouping data and/or classification data and/or application data that are present in the data processing device.

15. As per claim 35, Liang teaches the method according to claim 33, which comprises, with the central program autonomously separating administrative tasks and/or chains of tasks into subtasks for moving and/or replacing application entities ([COL 6 lines 50-55] e.g., an application entity, i.e., node, is chosen over other nodes and/or dynamically changed (e.g. replaced)

16. As per claim 38, Liang teaches the method according to claim 25, which comprises assigning at least some of the distributed hardware and/or software systems their own autonomous program that are stored in data processing devices in the form of autonomous agents that are subordinate to the central program ([Figure 1-agents], [COL 4 lines 1-10])

17. As per claim 39, Liang teaches the method according to claim 38, which comprises accessing, with the autonomous agent of an individual hardware and/or software system, rule data ([COL 4 lines 29-34] e.g., control cures/tasks) that are prescribed at the a system level in the data processing devices ([COL 7 lines 25-30] e.g., 'accessing' is interpreted as receiving a task)

18. As per claim 40, Liang teaches the method according to claim 39, wherein the rule data ([COL 4 lines 29-34] e.g., control tasks and/or selecting a suitable node) prescribed at the system

level in the data processing devices comprise rules for the individual system (e.g., which nodes perform which tasks and/or assigning a node to perform a task. Additionally, a rule would be a task that instructs the node to perform virus scanning, for example) and/or the interaction with the central autonomous program ([Figure 5A-512] e.g., when done, report result)

19. As per claim 41, Liang teaches the method according to claim 39, which comprises interchanging control and/or rule data via the communications networks between the central program and the autonomous agents of the individual hardware and/or software systems ([Figure 5A], [Figure 6], [COL 4 lines 1-15])

20. As per claim 42, Liang teaches the method according to claim 39, which comprises, with the central program selectively granting decision-making powers to the autonomous agents of the individual systems ([COL 6 lines 50-55] e.g., 'selectively' is interpreted as choosing task leaders which results in selecting who is perform the task), and withdrawing the decision-making powers, using the communications networks (e.g., dynamic assignment)

21. As per claim 43, Liang teaches the method according to claim 39, which comprises granting and withdrawing the decision-making powers permanently, temporally restricted, or dynamically ([COL 6 lines 50-55] e.g., dynamically assigning a task leader implies that ones that are not selected are not granted the authority to execute a task)

22. As per claim 44, Liang teaches the method according to claim 39, wherein the autonomous agents of the individual hardware and/or software systems respectively transmit general and/or system-specific control data to the data processing device of the central program via a communications network ([COL 4 lines 1-15], [COL 7 lines 18-25]) and/or publish the data

in generally accessible file systems and/or collaborate in a separation of administrative tasks and/or chains of tasks into subtasks.

23. As per claim 45, Liang teaches the method according to claim 25, which comprises operating the central program in different operating modes ([COL 4 lines 43-45] e.g., accident event and designated event, i.e., operating modes)

24. As per claim 46, Liang teaches the method according to claim 45, which comprises operating the central program in at least one operating mode selected from the group consisting of fully autonomous mode ([Figure 5-element 507], [COL 4 lines 1-15] e.g., management server finds a task based on an event) , partially autonomous mode, and with different reaction speeds.

25. As per claim 48, teaches the method according to claim 45, which comprises operating the central program in partially autonomous mode (e.g., user interaction) and changing and/or interrupting the partially autonomous mode by the autonomous agents of the individual systems ([COL 4 lines 1-10])

26. As per claim 49, Liang teaches the method according to claim 25, wherein the central program includes a notification component ([COL 7 lines 17-25] e.g., management server), and the notification component outputs information (e.g., events) regarding substeps of the work of the central program and/or the processing state thereof via an output device (e.g., alarms, infection)

27. As per claim 50, Liang teaches the method according to claim 25, wherein the distributed hardware and/or software systems comprise at least one application system ([Figure 1-element 108)

28. As per claim 51, Liang teaches the method according to claim 50, wherein the at least one application system comprises a plurality of entities (e.g., nodes) each controlling at least one service ([figure 1] e.g. agent MIB)

29. As per claim 52, Liang teaches the method according to claim 51, wherein the at least one service is selected from the group of interactive mode, batch mode, accounting services, printing services, messaging services, and network services ([COL 4 lines 30-35] e.g., network services)

30. As per claim 53, Liang teaches the method according to claims 51, wherein a plurality of application systems cooperate in a system family ([Figure 1])

31. As per claim 55, Liang teaches the method according to claim 25, wherein the distributed hardware and/or software systems comprise client/server systems and/or operating systems ([Figure 1])

32. As per claim 56, Liang teaches a system for managing and monitoring an operation of a plurality of distributed systems selected from the group consisting of hardware systems and software systems integrated into at least one communications network ([Figure 1]), the system comprising:

a data processing device ([Figure 1-108]), and at least one of a central autonomous program stored (element 106, 101) in said data processing device and autonomous agents, stored in data processing devices, for individual hardware and/or software systems (e.g. nodes) and/or input and/or output devices (e.g. nodes) at a central system level and/or an individual system level, and configured to carry out the method according to claim 25 (e.g. task execution)

Claim Rejections - 35 USC § 103

33. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

34. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

35. Claims 29-31 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang (USPN 7308493) in view over Padisetty et al. (USPN 20050114854)

36. As per claim 29, Liang teaches operating plans that regulate run times and availability of individual hardware and/or software systems ([COL 6 lines 45-55] e.g., task leader selection is dynamic based on event characteristics. The event characteristics are used to determine which node will function as a leader, i.e., availability of individual hardware systems) However, Liang does not teach that the information regarding the operating state of individual systems (e.g. nodes) relate to a current and/or future and/or periodic workload. Padisetty et al. teaches information regarding the operating state of individual systems, i.e., process status, regarding a current workload (e.g., process status of a task) ([0030])

Therefore, at the time the invention was made, one of ordinary skill in the art would have motivation to provide the status of a task that is being executed via a node. Liang teaches selecting a task leader for allocating tasks. Padisetty et a. teaches monitoring the process status in light of an executing task. Since tasks are allocated based on resource capacity, as taught by Liang, it would have been obvious to monitor the state of a node executing a task to avoid overloading the same node with additional tasks. By communicating the status of a node and its current workload, i.e., task execution, one of ordinary skill in the art could readily balance and allocate tasks to appropriate nodes.

37. As per claim 30 Padisetty et al. teaches the method according to claim 29, which comprises receiving, with the data processing device, the information regarding the operating state of individual systems in an active ([0030] e.g., monitoring process status is interpreted as continuously (e.g., active) communicating a state of an entity) and/or passive manner.

38. As per claim 31, Liang teaches the method according to claim 29, wherein the information relates to at least one of:

hardware including at least one of clients, servers, networks, and storage systems ([Figure 1] and software including at least one of applications ([Figure 1] e.g., agents), distributed applications having services that are dependent on one another, distributed application systems having virtualized services that are dependent on one another and/or independent of one another, and/or databases, and/or front ends.

39. As per claim 36, Padisetty et al. teaches the method according to claim 33, which comprises checking, with the central program a temporal progression of the administrative tasks

and/or chains of tasks that are transmitted to the individual hardware and/or software systems in the form of control data ([0030] e.g., process status)

40. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liang (USPN 7308493) in view over Padisetty et al. (USPN 20050114854) and in further view over Roytman et al. (USPN 7234073)

41. As per claim 37, Liang does not teach the method according to claim 36, which comprises configuring the central program to check continuously and/or at particular intervals of time. Roytman et al. teaches monitoring and polling the status of an agent ([COL 8 lines 63-65])

Therefore, at the time the invention was made, one of ordinary skill in the art would have motivation to monitor, from a central station, the status of remote agents. Liang teaches providing distributed agents within a node such that a node may execute various tasks. Roytman et al. teaches polling agents for their status. Since monitoring the state of an agent provides details as to the node's performance, resource usage, normal/error operational state, and current tasks being executed, it would have been obvious to continuously monitor the state of a remote node in order to assist the task leader in selecting an appropriate set of nodes for task execution.

42. As per claim 47, Liang teaches the method according to claim 45, which comprises operating the central program in partially autonomous mode ([Figure 1] e.g., monitor/keyboard/mouse input. Partially autonomous mode is interpreted as changing a program value via a person and/or allowing human interaction) but does not teach changing and/or interrupting the partially autonomous mode with a manual input on an input device by an authorized administrator. Liang teaches defining conditions of an event and corresponding tasks ([COL 4 lines 53-56].

Therefore, it would have been obvious to one of ordinary skill in the art to modify Liang as to interrupt, program, and/or change tasks ([COL 4 lines 30-35]) that are otherwise automatic via enabling a user to specifically define the type, number, and temporal task relations.

43. Claim 54 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang (USPN 7308493) in view over Awe et al. (USPN 20050177792)

44. As per claim 54, Liang does not teach operating the at least one application system in a virtual environment (e.g.. not defined) Awe teaches providing a virtual environment (0037] e.g., virtual memory)

Therefore, at the time the invention was made, one of ordinary skill in the art would have motivation to modify Liang to utilize virtual memory. Liang teaches configuring remote agents to run tasks. Awe et al. teaches remote, intelligent configuration of software agents. Since any program may be stored in a virtual memory, it would have been obvious to one of ordinary skill in the art to operate the program using at least part of a virtual environment.

Conclusion

45. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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46. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARRIN DUNN whose telephone number is (571)270-1645. The examiner can normally be reached on EST:M-R(8:00-5:00) 9/5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DD
04/24/09

/Albert DeCady/
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